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Alcohol Research: Meeting the Challenge

National Institute on
Alcohol Abuse and
Alcoholism

U.S. Department of
Health and Human
Services

Public Health
Service

Alcohol, Drug Abuse,
and Mental Health
Administration

E20.8302:

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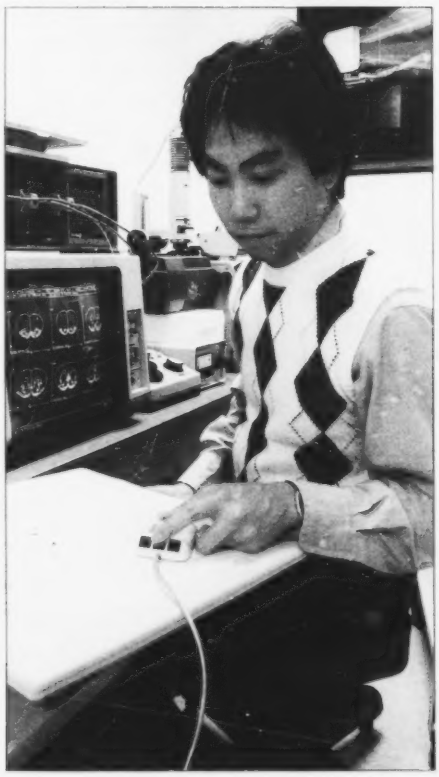
Meeting the Challenge

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration
National Institute on Alcohol Abuse and Alcoholism
5600 Fishers Lane
Rockville, Maryland 20857

Introduction

This has been a century of impressive achievement in public health. The advent and widespread application of vaccines against such diseases as smallpox, diphtheria, and polio have virtually eliminated those once dreaded illnesses. Tuberculosis, the cause of one in eight deaths in 1900, is now uncommon and still more rarely fatal. Antibiotics have made many of the most infectious diseases easily curable.

Modern science is now increasing its attention to chronic health problems, such as heart disease and cancer, where major advances have been made in the past decade. But alcohol abuse is one major health problem that has not been significantly eroded. It plays a role in 1 of every 10 deaths in the United States. In some segments of the population, it produces still higher mortality. It is the principal cause of deaths through accidents among those aged 15 to 24. The projected costs of alcoholism and alcohol abuse in 1983 were $116.7 billion.



Research is an important means of finding solutions to these problems. Modern alcohol research involves highly trained scientists, computers, sophisticated imaging techniques, gene splicing, prevention and treatment models, surveys, and statistics. It includes researchers developing tests to identify gene abnormalities that make individuals susceptible to alcoholic cirrhosis; researchers conducting studies on the components of the body's cells; researchers studying the effects of alcohol on cells in the liver, heart, nerve, muscle, pancreas, and blood to determine how the drug alters membrane structure; and researchers studying family histories and genetics.

Opposite, scientists conduct genetic studies to determine if hereditary factors are involved in the expression and severity of alcohol abuse and alcoholism. Bottom, an investigator studies the effects of alcohol on the central nervous system.

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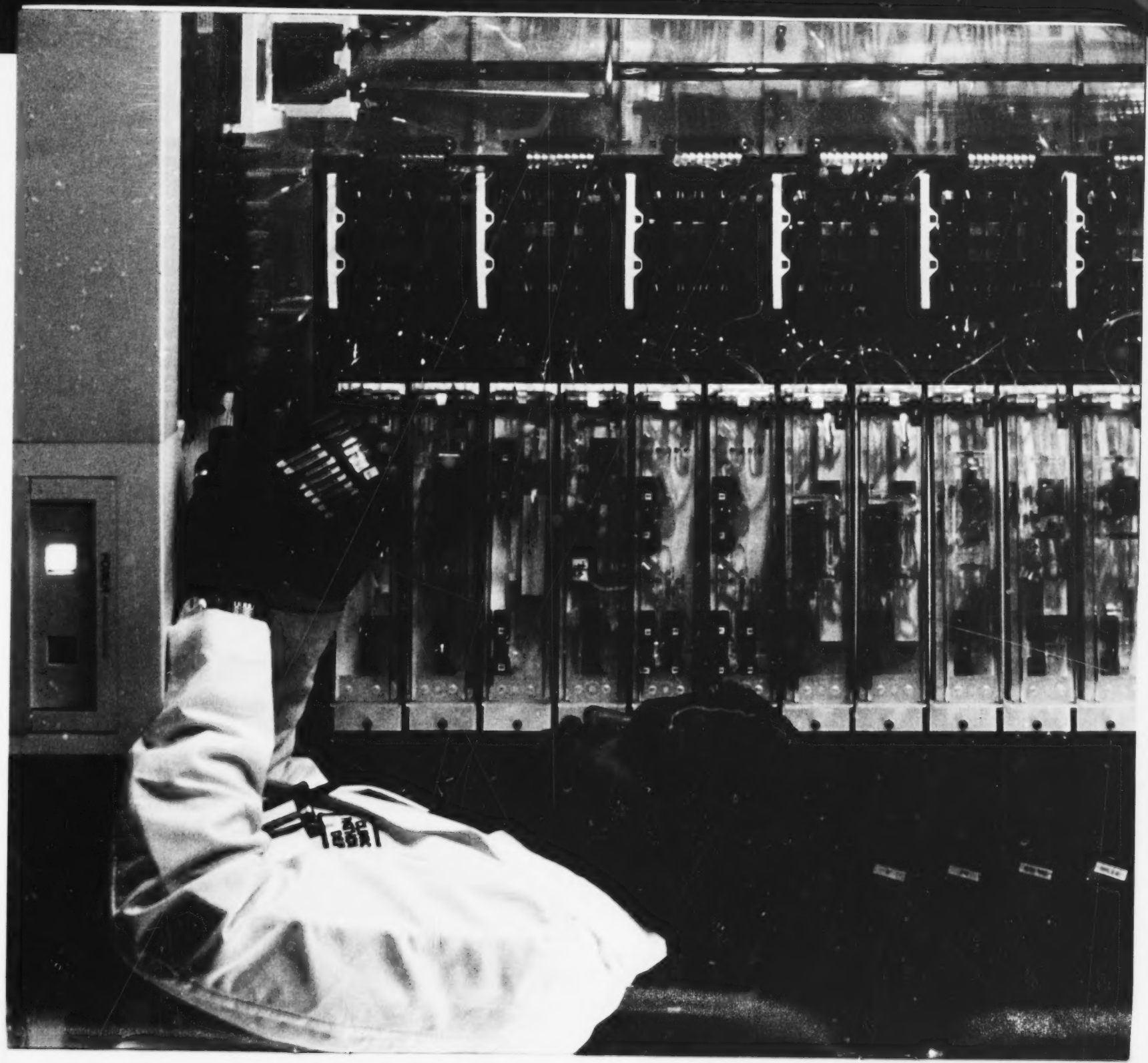


Introduction

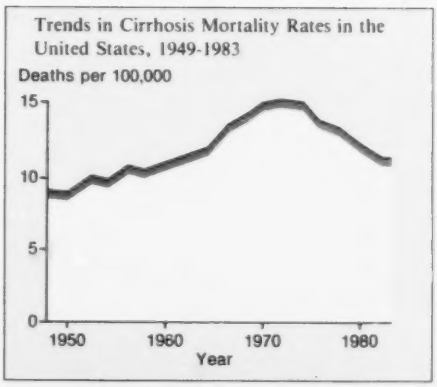
Progress is being made. Since 1980, the number of alcohol-related motor vehicle driver fatalities declined for those aged 16-24 years, as well as for drivers of all ages. The annual death rate from cirrhosis is down. The proportion of adolescents (12-17) who say they abstain from using alcohol has risen. And the number of major U.S. corporations that provide an employee assistance program has steadily increased.

Public awareness has grown, too. Ten years ago, driving while intoxicated was not considered to be a serious national problem by most people. Today, we have seen a Presidential Commission and Federal legislation to combat the problem, and communities have taken action to reduce the problem.

Americans, in general, are taking better care of themselves. There is increased interest in exercise and improved health habits, especially in the area of diet and nutrition.

As a result of public information campaigns, more women than ever before say they are aware of the dangers of drinking during pregnancy, and drinking during pregnancy has decreased over the last six years.

An encouraging aspect of alcohol problems is that they are preventable, and prevention of alcohol problems has become an important research area.



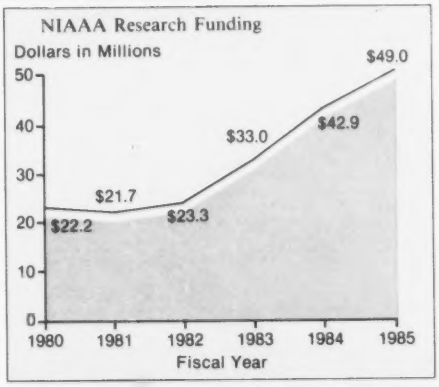
Perhaps most important, the stigma and myths associated with alcoholism are being reduced. A new attitude of compassion and treatment has provided freedom for alcoholics to admit their problems to family and friends and to seek treatment. Treatment is now more available than ever before, and treatment research is probing new and more effective ways of helping people recover.

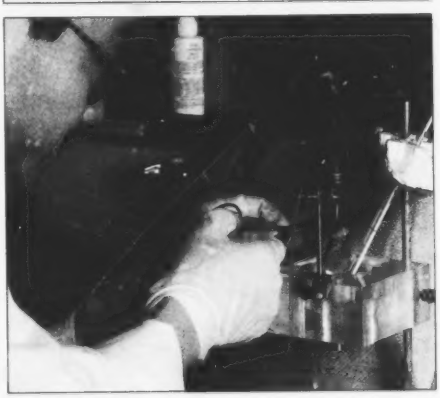
Opposite, sophisticated technology enables laboratory technicians to perform more than 20 tests at once on a blood sample from a patient participating in clinical studies. Top, a patient admitted to an inpatient unit receives bedside care.

Research

In meeting its legislative mandate as a research institute, NIAAA supports and conducts a wide range of research programs conducted by intramural investigators and by scientists affiliated with universities and other research organizations. Scientific investigations today being conducted in modern research laboratories across the Nation represent a major commitment to the expansion of knowledge into the causes, consequences, and means for preventing problems resulting from alcohol abuse and alcoholism.

NIAAA's budget in FY-85 was $62.7 million, of which $49 million or 78 percent was appropriated for research. This represents a 13 percent increase in funding for all Institute activities over the previous fiscal year, and a 14 percent increase in appropriations for research.





The Institute supported approximately 280 research grants in FY-85. This included support for 100 new and competing regular research grants and continued funding for nine alcohol research centers.

The results of these scientific endeavors not only benefit those suffering from alcohol problems but also advance the understanding of basic science.

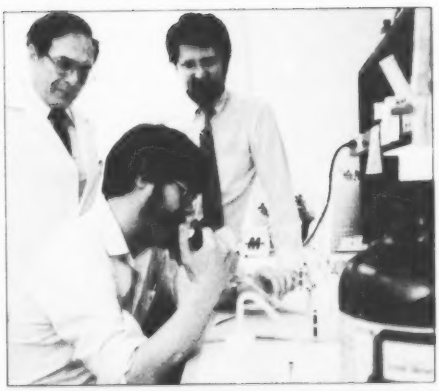
Opposite, a scientist investigates alcohol's effects on the cardiovascular system. Top, a researcher studies endocrine system changes resulting from alcohol consumption. Bottom, investigations are conducted to determine how alcohol interferes with functions of the liver.

Genetics

The basis of all heredity is the gene, a small chain of biochemicals that determines the characteristics that shape each individual and is in turn passed on to offspring. Investigators are studying genes and chromosomes for abnormalities that may predispose persons to alcohol abuse and alcoholism.

For instance, NIAAA-supported researchers at the Indiana University School of Medicine are studying the genetic variations that influence the rate of alcohol metabolism among different ethnic groups. Such investigations could help provide a biochemical data base necessary for identifying biomedical and genetic factors involved in alcohol abuse and alcoholism.

Efforts to identify and isolate faulty gene codings among the 10,000 genes in each cell could lead to ways of identifying individuals who are genetically vulnerable to alcohol dependence and complications of alcohol problems like liver disease. If genetic screening procedures can be designed to test family members of individuals who suffer from alcohol problems—as well as others at risk—appropriate educational or preventive measures can be prescribed to reduce the prevalence of alcohol abuse and alcoholism in society.



Top, scientists conduct investigations into the genetic aspects of alcoholism. Middle, proteins are separated from a human white blood cell on the basis of size and electrical charge in a process called two-dimensional protein electrophoresis. Computer enhancement creates a pattern of colors that permits investigators to discern hereditary material within proteins. This technique is being applied in human and animal studies by investigators searching for genetic markers and genetic determinants of alcoholism and alcohol abuse.

Researchers at Washington University School of Medicine in St. Louis, at the NIAAA Intramural Laboratory of Clinical Studies in Bethesda, MD, and elsewhere are investigating the environmental and genetic influences that may lead to drinking problems. For example, studies by the Washington University researchers have indicated that if the natural parents of adopted children were alcoholic, the children ran a greater risk of becoming alcoholic, despite being raised by nonalcoholic parents. However, if the natural parents were not alcoholic and the adoptive parents were, the risk was not increased.

By deciphering coded chains of biochemicals, and understanding the complex environmental influences that may lead to alcohol problems, scientists hope to determine how the dynamic interaction of life events and living genes interact to produce the disease.

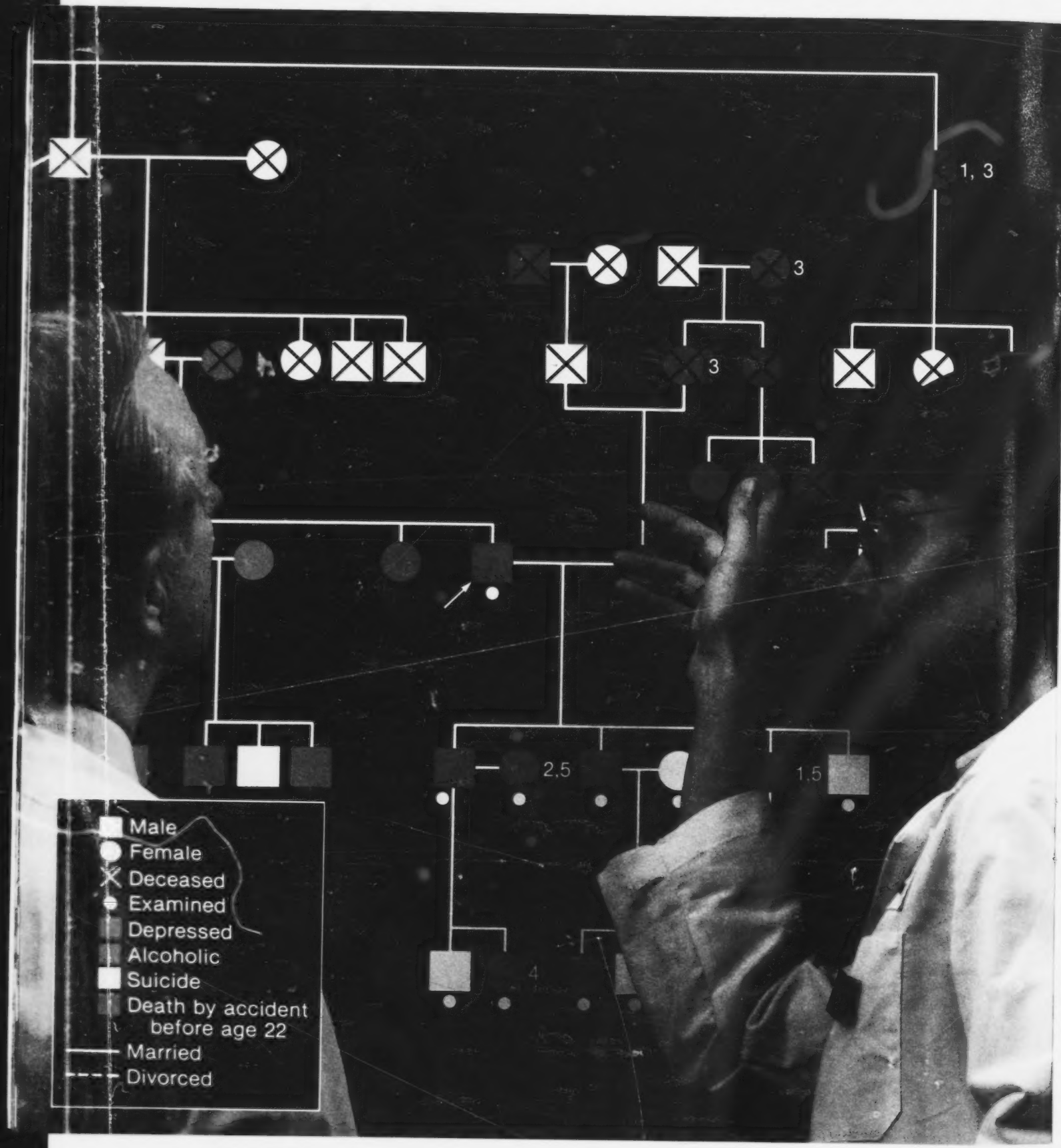
Fetal Alcohol Syndrome

A decade-long research effort investigating the effects of alcohol on pregnancy has conclusively established that alcohol use during pregnancy poses a threat to the health of the child. The condition, known as Fetal Alcohol Syndrome (FAS), is a serious combination of birth defects involving both physical and mental impairments.

Progress has been made in understanding and documenting the risks of alcohol use during pregnancy, but many challenges remain. It is estimated that today between one and two babies in every 1,000 live births in American families are seriously affected, and between three and five children per 1,000 are partially affected by FAS. The Public Health Service is committed to reducing the incidence of FAS by 25 percent by 1990.

To reach this goal, scientists are developing methods to identify and treat pregnant women with alcohol problems as well as those who are at risk. Major efforts are under way to gather scientific evidence to determine the stages of pregnancy when alcohol-related birth defects are most likely to occur, and to educate the public and health care providers about the risks involved. While some scientists are developing effective ways to detect alcohol abuse, and to treat alcohol dependence in pregnant women, others are seeking ways to prevent FAS and other alcohol-related birth defects.

Public education efforts, such as the *Healthy Mothers, Healthy Babies* campaign, have resulted in more women than ever before saying they are aware of the risks of drinking during pregnancy. In fact, 90 percent of the respondents in one recent survey knew that drinking during pregnancy might be harmful.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3
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Male
Female
Deceased
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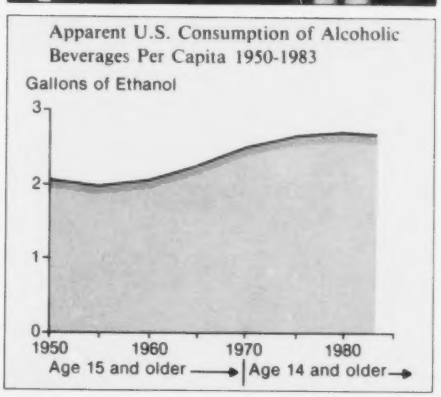
Depressed
Alcoholic
Suicide
Death by accident before age 22
Married
Divorced

Risk Factor Research

Investigators studying risk factors employ many kinds of social and psychological testing methods to understand drinking patterns and related problems that may put some groups at higher risk for developing drinking problems. Such research efforts complement the work of other investigators engaged in the search to identify genetic markers and genetic determinants of alcohol abuse and alcoholism.

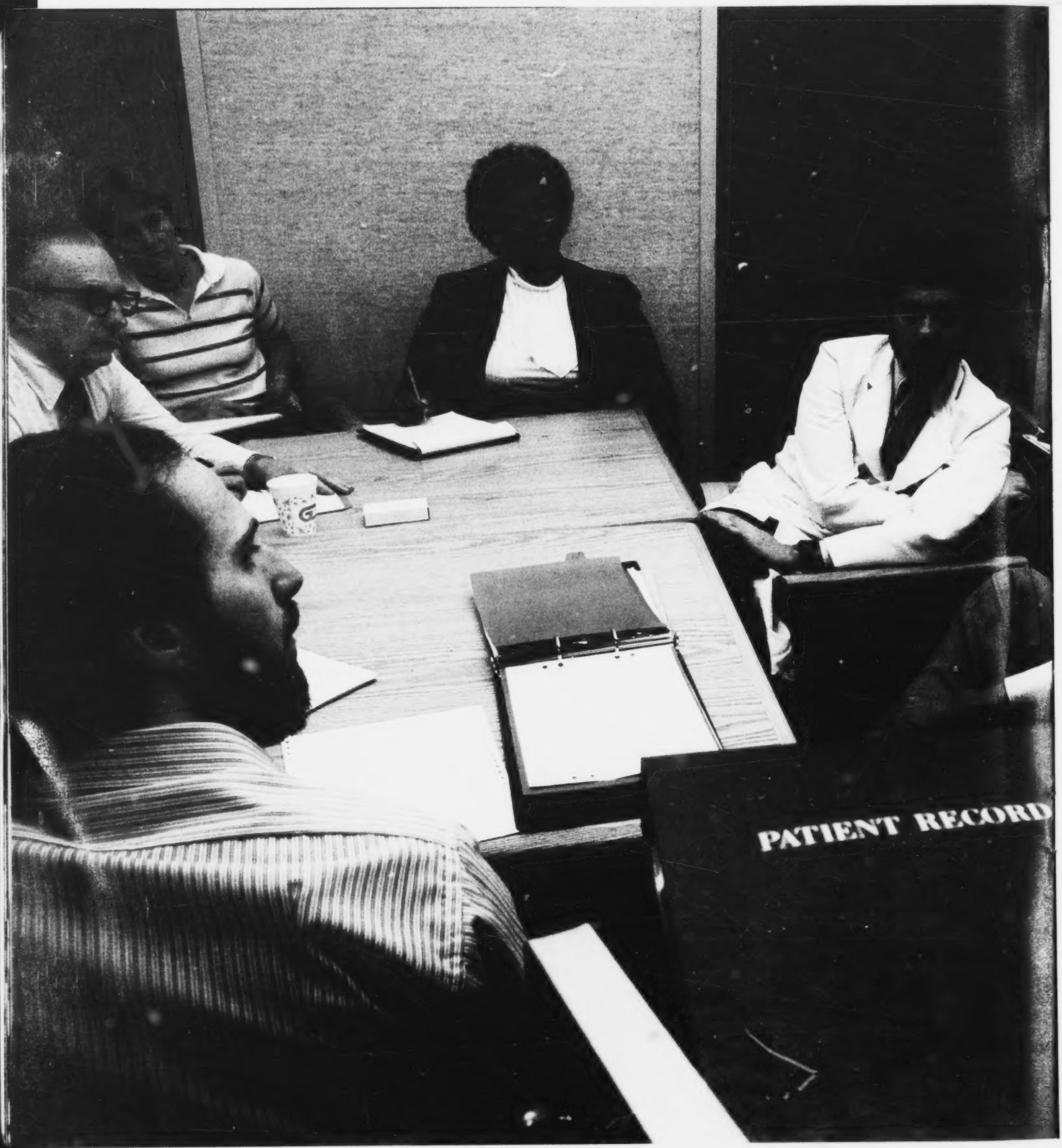
Scientists at the Medical Research Institute in San Francisco—one of nine NIAAA-supported alcohol research centers—are conducting a major national survey of drinking practices, attitudes, and problems to identify characteristics useful for identifying groups most at risk. In addition, analyses are made of cultural forces involved in drinking behavior that may result in alcohol-related automobile accidents, alcohol problems among the elderly, drinking in the workplace, alcohol problems among minority groups, and youthful alcohol abuse. To accomplish this, researchers pool the survey results with social and health statistics and with interviews of health and social service providers.

Apparent U.S. Consumption of Alcoholic Beverages Per Capita 1950-1983



NIAAA-supported investigators at the University of Florida are testing the possibility that real and perceived isolation from society is an important factor that could result in drinking problems, especially among the elderly. Some studies focus specifically on retirement as an important event in leading to drinking problems.

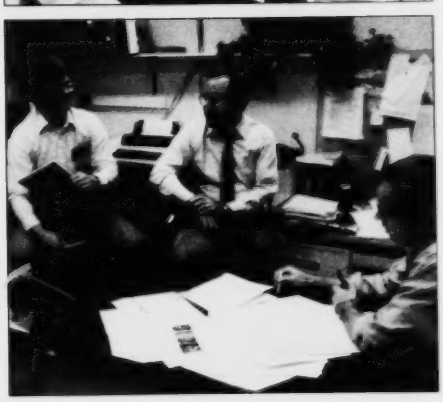
Opposite, researchers construct family pedigrees to study genetic factors in alcoholism and alcohol-related problems. Bottom, scientists explain to a volunteer subject how she can participate in their research on the effects of retirement on drinking behavior.


PATIENT RECORD

Treatment

Investigators are testing various alcohol treatment methods for effectiveness and reliability to devise methods to match persons seeking help for alcohol-related problems with the optimal treatment approach and setting.

Using improved methods of cost-effectiveness and cost-benefit analysis, among other techniques, NIAAA-funded researchers at the University of Connecticut Health Center are conducting patient-treatment matching studies that could potentially improve treatment outcome, cut medical costs, and provide guidelines for public policy decisions regarding third-party reimbursements.



These researchers are developing a multidimensional classification system of persons suffering from alcoholism that can be used to help predict treatment outcome for inpatient treatment services. To do this, investigators are gathering and analyzing information on family histories, drinking patterns, and social adjustment, among other factors, and comparing the data with treatment outcome. This typology strategy helps assess types of patients who can best benefit from specific treatments.

Opposite, investigators discuss the course of treatment given to inpatients. Top, a ward nurse orients a newly admitted patient. Middle, scientists collect blood samples from patients to detect those who may have developed severe physical complications secondary to alcoholism. Bottom, research scientists discuss a model to aid in the prediction of treatment outcome for alcoholics who have received inpatient services.

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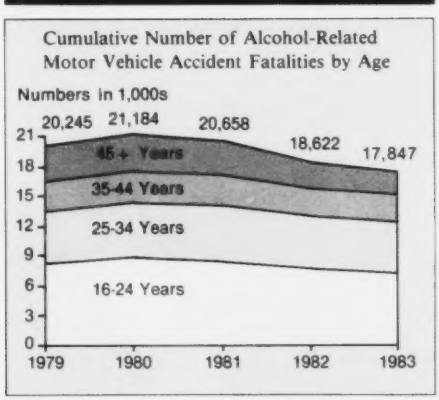
Safety

Despite the encouraging trend in decreased traffic fatalities, researchers agree that alcohol continues to contribute significantly to the carnage on our highways. Evidence is growing that alcohol contributes to the incidence and severity of accidents in the home, in the workplace, and during recreational activities as well.

Investigators are studying how alcohol affects human performance of the complex skills necessary in driving and in aviation. Such studies leave little doubt that as blood alcohol levels increase, serious procedural errors due to performance impairment are also likely to increase.

These research efforts involve teams of scientists using statistical methods, computers, and other sophisticated technology to test alcohol's involvement in transportation and other accidents—including drownings, boat accidents, fires, and falls—that injure, maim, and claim the lives of thousands of Americans each year.



Investigators studying patients admitted to a New York City hospital emergency room for injuries from falls, fire, and marine accidents, for instance, found that prior to their injuries, 20 to 25 percent of the victims had been drinking to the point that they would be considered legally intoxicated in most States.

Opposite, investigators use driving simulators to test performance of subjects dosed to known blood alcohol concentrations.

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RN
Sobering Facts
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Drunk
Lose
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Roll Again
and Change
Direction
Advance
2 Spaces
Sobering Facts

Prevention

Prevention research focuses the expertise and technology from broad areas of scientific inquiry upon a single objective: reducing the incidence and prevalence of alcohol problems.

The scientific foundation of prevention research rests upon biomedical and psychosocial investigations, sophisticated data analysis techniques, education and information programs, public policy strategies, and mass media campaigns.

By systematically applying the fruits of these research efforts through unified approaches involving schools, families, media, government, and community and voluntary organizations, it is possible to reduce alcohol problems, and so reduce deaths, injuries, and other adverse consequences associated with alcohol consumption.

NIAAA-funded prevention researchers at the Human Ecology Institute in Raleigh, NC, are developing sophisticated computer programs to study the myriad combinations of policies on alcohol availability and other controls.

By using sophisticated analysis techniques, the researchers study and assess the potential payoff, costs, and constraints of various prevention strategy options. The results help decisionmakers implement what are most likely to be effective measures for preventing problems associated with alcohol abuse and alcoholism.

Together with education and information programs, and mass media campaigns for individuals at special risk, such policy studies seek to create an environment of concern, commitment, and resolve in reducing or eliminating alcohol problems.

Prevention research focuses on many issues. For example, in an attempt to understand drinking behavior, NIAAA-supported investigators at the Medical Research Institute in San Francisco are analyzing trends in drinking practices and problems that arise among drinkers of different cultural and socioeconomic backgrounds. The research, based largely on surveys, helps researchers understand the cultural forces involved in drinking behavior, and in problems involving automobile accidents, youth, and drinking in the workplace.

Opposite, Sobering Facts, a board game developed by clinical researchers, is an innovative tool for disseminating facts about alcohol abuse and alcoholism. It is one component of an education program for inpatients.

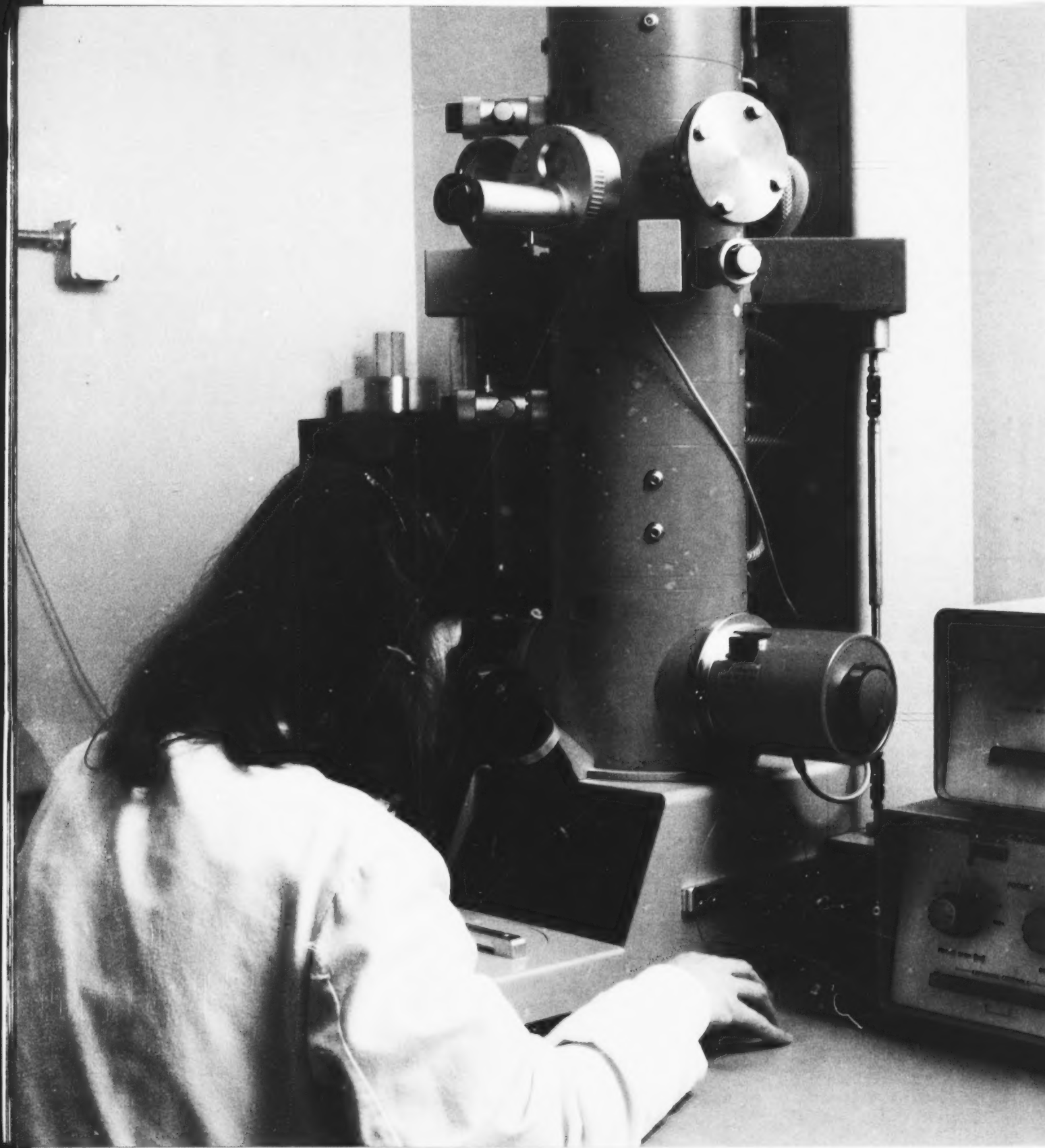
Prevention

Researchers at the NIAAA-funded Prevention Research Center in Berkeley, CA, are also focusing their efforts on cultural patterns, as well as on family drinking behavior. Investigators are studying the characteristics of families with an alcoholic member to learn how drinking affects family stability. Such investigations may help determine how alcohol problems develop, and aid in developing appropriate and effective measures that could help prevent the suffering that these problems create in families.

In another research effort there, investigators are developing and evaluating programs and public policy options regarding the responsibility of servers of alcoholic beverages. By developing and supporting efforts to train bartenders and other servers, prevention researchers hope to mitigate alcohol-related problems by effecting changes in the immediate drinking environment.

Other investigators at the NIAAA-funded Prevention Research Center in Berkeley, CA, are analyzing overt and subtle messages in mass media to determine how drinking is portrayed on television and in alcohol advertising in college newspapers. From these studies, investigators are refining and expanding the understanding of psychosocial risk factors that may contribute to problem drinking.

Top, researchers discuss results of national survey data of drinking practices, attitudes, and problems.

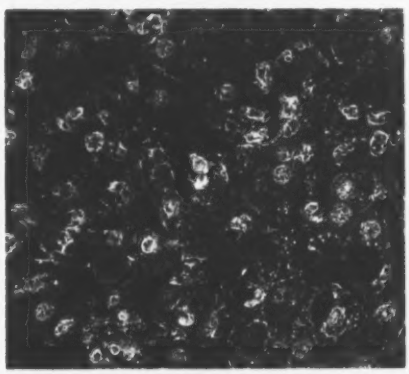


Biology

Some researchers believe the reason some people suffer debilitating mental problems from drinking harmful amounts of alcohol is that they have decreased levels of chemicals that normally facilitate the transmission of nerve signals in the brain.

It may be that a lack of these chemicals, called neurotransmitters, is involved in the brain problems that affect memory and other reasoning functions in persons suffering alcoholism in the chronic stage.

At New York's Mount Sinai School of Medicine, NIAAA-supported investigators are developing tests for identifying gene abnormalities that make individuals susceptible to alcoholic cirrhosis—chronic disease that destroys liver function—and to determine how alcohol affects the body's metabolism of vitamins and other nutrients that are essential for overall mental and physical health.



Scientists at the University of Colorado Health Sciences Center, at NIAAA's Intramural Laboratory for Studies of Neuroadaptive Processes, and at centers elsewhere, are conducting studies on the effects of alcohol on the living components of the body's cells. These investigations are based on evidence suggesting that for some people, cells in parts of the brain and nervous system may be particularly sensitive to alcohol and contribute to functional disorders and drinking problems. For instance, alcohol could change the ways nerve cell membranes act. These altered cells may result in faulty nerve signal transmission, leading to abnormal brain functioning and scrambled brain messages. Such alcohol-related nerve cell changes may even alter the body's tolerance to alcohol and perhaps lead to physical dependence.

That is why researchers at the NIAAA Intramural Laboratory of Clinical Studies (on the campus of the National Institutes of Health in Bethesda, MD) are investigating the use of chemical agents that may help raise the levels of these neurotransmitters and could improve patients' ability to remember.

Opposite, an investigator conducts electron microscopy studies to identify factors responsible for alcohol induced cirrhosis of the liver. Middle, color enhancement permits researchers to analyze the effects of alcohol on tissues and on components of cells from a liver sample.

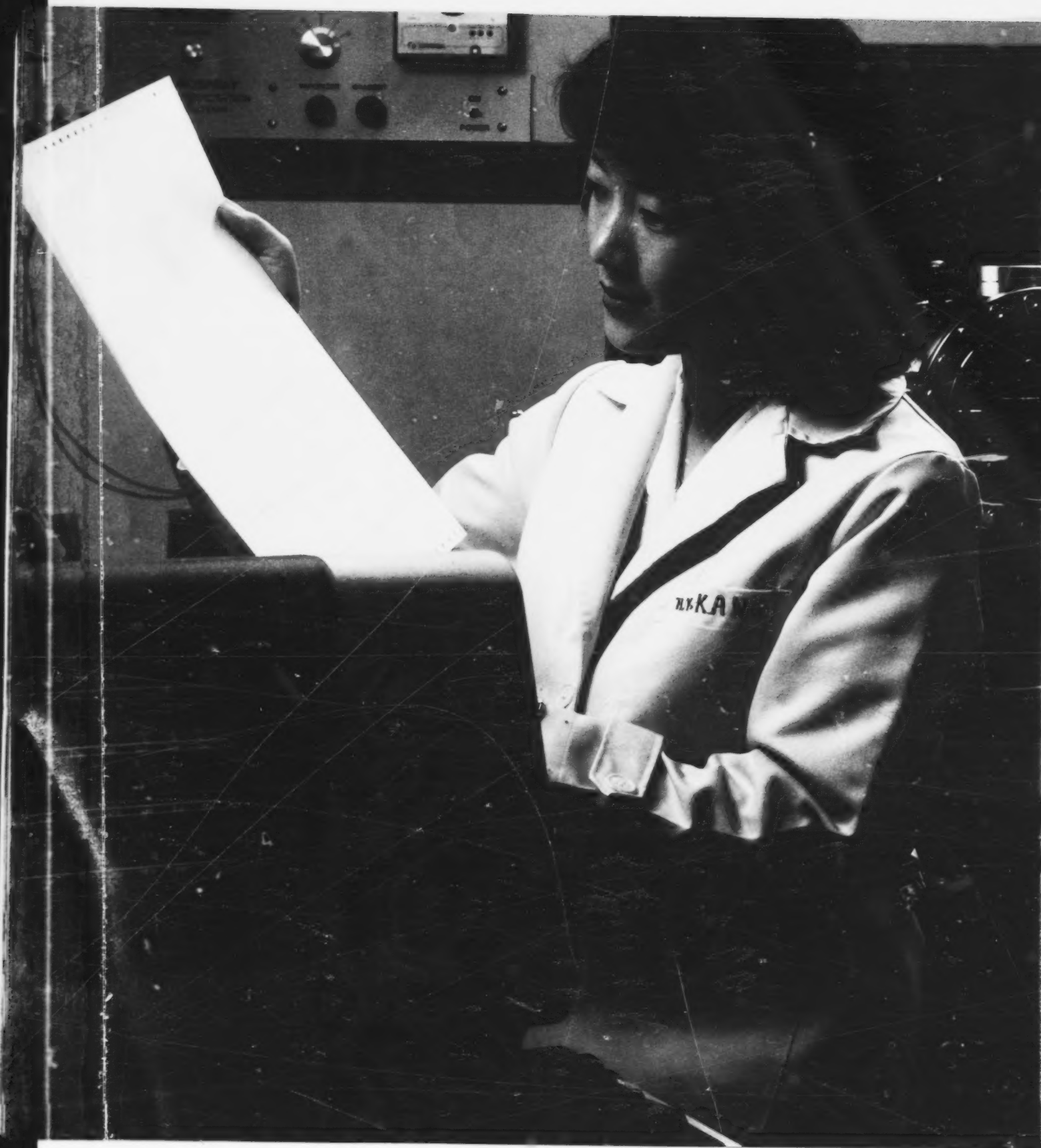
Biology

Investigators at the Laboratory are also testing the effectiveness of chemical agents that alter the levels of certain biochemicals in the brain in such a way that they help reduce an alcoholic's cravings for alcohol. If successful, such treatments could be used to facilitate the maintenance of sobriety and abstinence in individuals suffering alcohol dependence.

Such studies—along with sophisticated Nuclear Magnetic Resonance techniques that permit scientists to peer into brain tissue without X-rays—help investigators learn more about brain functions and hold promise for helping many severely disabled patients.

At Hahnemann University School of Medicine in Philadelphia, NIAAA-funded researchers are studying the effect of alcohol on cells in the liver, heart, nerve, muscle, pancreas, and blood to determine how the drug alters membrane structure as well as the activities of enzymes and proteins important for biological and behavioral equilibrium. An important research effort investigates alcohol toxicity in the liver and the possibility that liver disease may result in part from lowered availability of oxygen to cells in the liver. In another study, researchers are studying the damaging effects of alcohol on cells in the heart muscle and the interaction of alcohol with heart medications.

Opposite, using brain imaging techniques, scientists hope to identify functional abnormalities that will help in diagnosis and in prescribing treatment for patients with alcohol-induced brain damage.



Intramural Research

Each of the Institute's four intramural laboratories emphasizes a different area of investigation into alcohol abuse and alcoholism. While research is alcohol-related, the findings are often helpful in the understanding of basic biologic processes and the many mysteries of how the human body functions. Besides the Laboratory of Clinical Studies, located on the campus of the National Institutes of Health in Bethesda, MD, the Intramural Research Program directs the Laboratory of Preclinical Studies, the Laboratory of Metabolism, and the newly established Laboratory for Studies of Neuroadaptive Processes (LSNAP). Conducting investigations to determine how the nervous and hormonal systems respond to chronic alcohol use, LSNAP researchers seek to identify the determinants of ethanol dependence and diseases of the nervous system consequent to alcohol abuse.

Investigators at the Laboratory of Metabolism are conducting sophisticated analyses of how ethanol metabolism in liver and other organs alters the function of the organs and produces pathologic consequences.

At the Laboratory of Preclinical Studies, scientists are concentrating their efforts on ascertaining how ethanol produces inebriation. Researchers in this laboratory of the Intramural Research Program are using electrophysiologic techniques that allow them to examine ethanol's effects on single cells in the brain (neurons) and even on specific portions of such neurons.

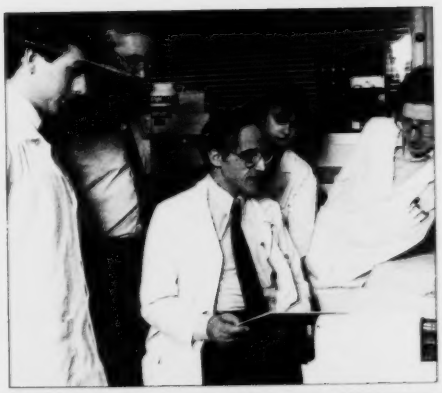
Through the sum of such studies, the NIAAA Intramural Research Program is generating an understanding of mechanisms by which alcohol produces intoxication, dependence, tolerance, and organ damage. Through such understanding of the mechanisms of ethanol's actions, appropriate alcoholism prevention and treatment strategies are being formulated.

Opposite, a researcher collects results of spectrometry studies used in investigations to identify biological markers for alcoholism. Top, brain imaging technology permits investigators to visualize the changes in the brain caused by chronic alcohol use. Bottom, scientists study the way the brain of an alcoholic responds to sensory stimulation. Recent studies indicate that alcoholics respond differently to such stimuli than do non-alcoholic persons.

Extramural Research

NIAAA's Extramural Research Program provides grant awards to investigators at more than 100 universities, hospitals, institutes, and foundations across the Nation. In addition, a small number of contracts are supported for data collection and analysis and to meet other special needs of the research program. NIAAA currently supports more than 250 projects including investigator-initiated Project Grants, Research Centers for interdisciplinary studies, Research Scientist Development Awards, Small Grants, Small Business Innovative Research Grants, and contracts. The research includes studies in genetics, molecular biology, biochemistry, metabolism, neurosciences, behavioral and environmental factors, alcohol-related safety issues, alcohol-related medical disorders, prevention, treatment, and the incidence and prevalence of alcohol abuse and alcoholism.

Currently, NIAAA supports nine research centers whose role is to concentrate on alcohol investigations from a variety of disciplinary and interdisciplinary perspectives. The focused support encourages research efforts in the alcohol field and attracts and trains new researchers. The Centers complement the regular research project grant program and provide long-term support for research.



Each Center has a distinct research theme relating to alcoholism and other alcohol-related problems. The major theme at each Center is approached in an interdisciplinary manner by its research components, which function under the general administration of a scientific director.

In addition, NIAAA provides support for research training through National Research Service Awards to institutions and individuals. NIAAA currently supports 67 trainees, including 26 predoctoral and 41 postdoctoral trainees. Support is provided for the training of minority researchers through the Minority Access to Research Careers Program. Research on the causes and effects of alcohol abuse spans the entire spectrum of both the biomedical and the behavioral sciences and training is provided in a wide range of scientific disciplines.

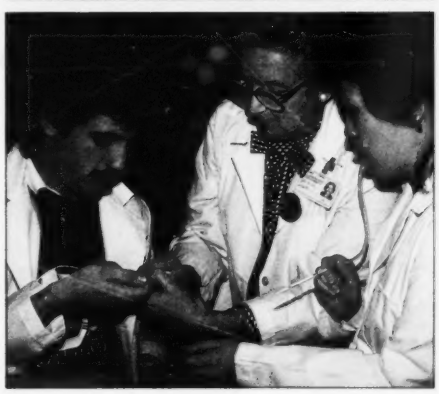
Opposite, an investigator prepares samples for study. Top, an investigative team examines the results of experiments showing how chronic alcohol use produces liver damage. Middle, an aerial view of The University of Connecticut which operates an NIAAA alcohol research center. At bottom, a researcher prepares brain samples for study.

Partnership

Alcohol abuse and alcoholism represent a public health problem on the level of cancer and heart disease. Yet, hundreds of thousands of "recovering" alcoholics, those who can successfully abstain from drinking, are leading healthy, productive lives, and often choose to become active in the field. Aside from these individuals, alcoholism treatment professionals, policymakers, doctors, nurses, State and local government officials, researchers, and volunteers are all active in the alcohol field today.

This partnership of professionals, volunteers, and recovering persons makes the alcohol field strong. It is reflected in grassroots groups such as Mothers Against Drunk Driving, national organizations such as the National Council on Alcoholism, the National Association of State Alcohol and Drug Abuse Directors, and the Alcohol and Drug Problems Association of North America, and self-help organizations such as Alcoholics Anonymous and Al-Anon.

NIAAA works closely with the many public and private organizations, such as the National Council on Alcoholism, the Research Society on Alcoholism, the National Federation of Parents for Drug-Free Youth, and Alcoholics Anonymous, that represent individuals, treatment facilities, volunteers, researchers, parent groups, and others. This nationwide network expands the benefits of the Institute's efforts many times over.

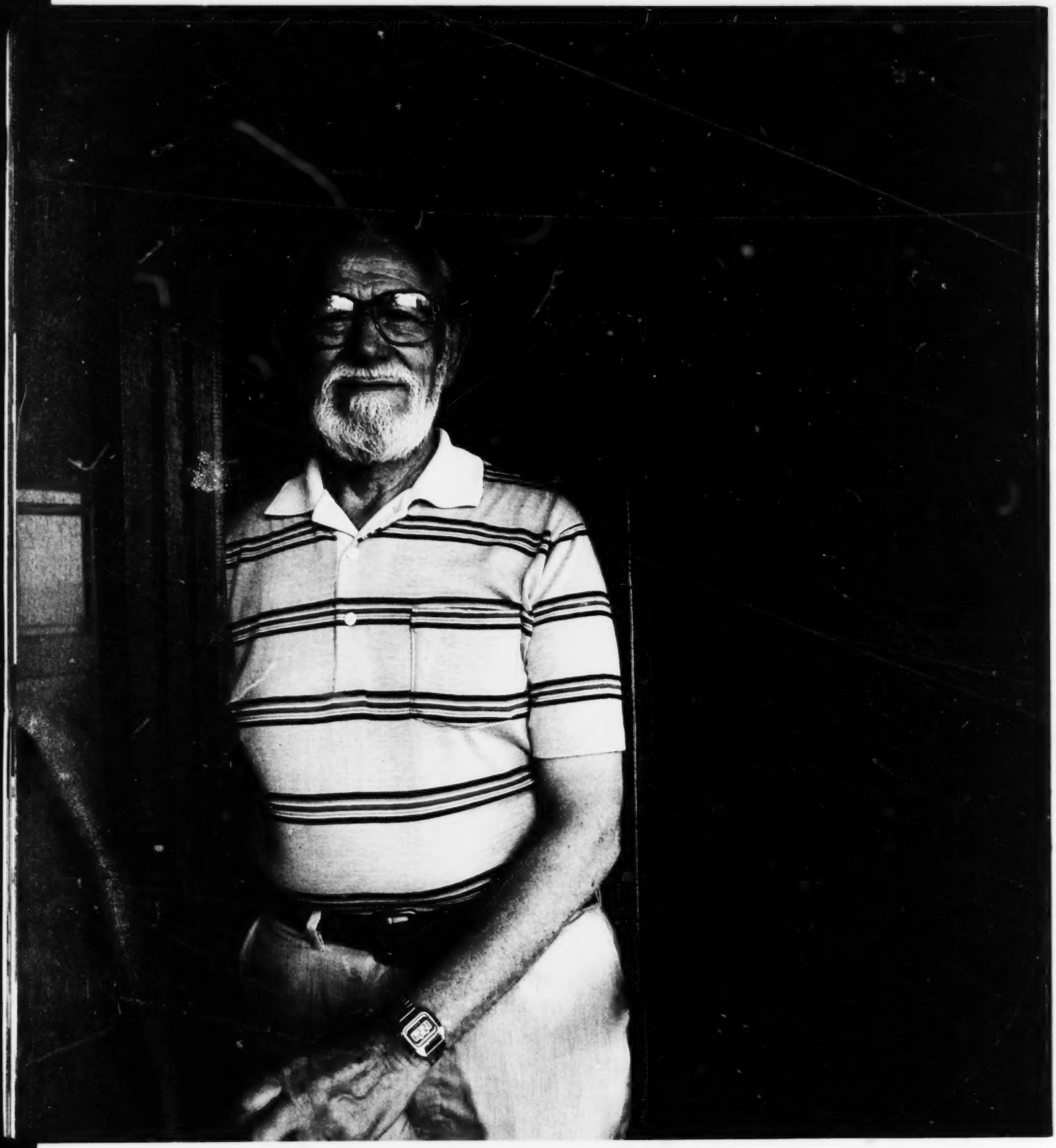


The State and Territorial alcoholism program offices represent the most direct effort to reduce the incidence of alcohol problems. NIAAA works closely with the State directors in coordinating programs such as the Secretary's Initiative on Teenage Alcohol Abuse, which involved youth from around the country, and the 1982 NIAAA Prevention Media Campaign, which involved all 50 states and hundreds of local groups and organizations.

NIAAA collaborates with private sector efforts to prevent alcohol and other drug problems. One example was the "Chemical People" project which organized local task forces to encourage community responsibility. Through its National Clearinghouse for Alcohol Information, NIAAA sent out a special package of materials that stressed to young people "how to say no."

The Healthy Mothers, Healthy Babies Coalition, a public education and information association of professional, voluntary, and government organizations, also uses materials from NIAAA in its campaign to prevent birth defects by promoting healthy behavior among women planning pregnancy or who are currently pregnant.

NIAAA encourages the establishment of employee assistance programs by collaborating with labor and management initiatives and providing technical assistance. The increase in occupational



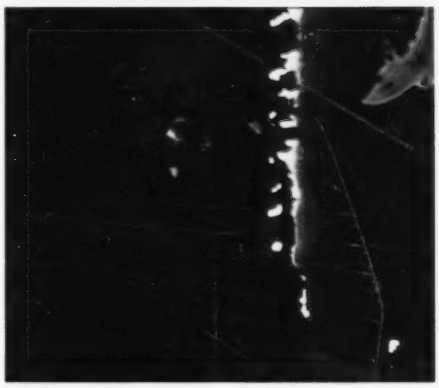
Partnership

programs over the past decade, especially among Fortune 500 companies, has been substantial. New opportunities for alcoholism prevention at the worksite have been created by the introduction of wellness programs at many large corporations and by the work of the Association of Labor-Management Administrators and Consultants on Alcoholism (ALMACA) and other national groups.

In the area of health insurance coverage, NIAAA collaborates with health insurers and with other Federal agencies to develop data on the impact of alcoholism treatment upon the utilization and cost of health care. This information is disseminated widely to organizations in both public and private sectors.

NIAAA and the National Highway Traffic Safety Administration (NHTSA) work hand in hand in efforts to reduce alcohol-related highway deaths. Together they support conferences dealing with alcohol and the drinking driver, as well as the many drinking driver campaigns that have been organized by adult and youth groups across the Nation.

NIAAA cooperates closely with the National Institute on Drug Abuse (NIDA). NIAAA is a cosponsor with NIDA on several research grant announcements and conferences, and the clearinghouses of both Institutes commonly make cross-referrals.



NIAAA has data collection agreements with agencies such as the World Health Organization (WHO), National Center for Health Statistics (NCHS), and the U.S. Centers for Disease Control (CDC). These agreements ensure a comprehensive gathering of the epidemiological data that are needed to carry out research and prevention programs effectively.

WHO has become a major focus for NIAAA international cooperation and collaboration since the Institute was established in 1970. In addition, bilateral activities are being conducted under formal U.S. agreement with a number of foreign countries.

In addition, collaborative agreements between NIAAA and the National Institutes of Health (NIH) facilitate the sharing of sophisticated technological resources available on the NIH campus for use in alcohol research. An example is their collaboration in the area of imaging techniques for measuring the anatomy and function of the brain and other organs.

NIAAA investigators are also working with researchers from the National Institute of Mental Health (NIMH) on collaborative investigations ranging from clinical to basic research. Some investigators are seeking to identify possible common factors underlying alcoholism, depression, anxiety disorders, and drug abuse. Others are involved in biochemical and electrophysiological studies of central nervous system functioning.

Mission

The National Institute on Alcohol Abuse and Alcoholism was established by the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970. The mission of NIAAA, since its creation, has been to provide a focus for the Federal effort to increase knowledge and promote effective strategies to deal with economic, social, and human devastation associated with alcohol abuse and alcoholism. While it originally funded treatment, training, and prevention programs, today, NIAAA is a research institute committed to promoting and carrying out the long term basic and applied research required to accomplish this mission. The problem is multifaceted, multidimensional, and complex. There is no one cause; there will be no one solution.

It is the Policy of the United States...to Provide Leadership in the National Effort to Reduce the Incidence of Alcoholism and Alcohol-Related Problems Through...

a continued Federal commitment to research...

a commitment to extensive dissemination... of the most recent information and research findings...

the provision of technical assistance to research personnel, services personnel, and prevention personnel...

the development and encouragement of prevention programs...

the development and encouragement of effective occupational prevention and treatment programs...

the provision of a Federal response to alcohol abuse and alcoholism...which encourages the greatest participation by the private sector...

Public Law 98-24

In addition, NIAAA has the responsibility for disseminating information derived from ongoing research projects and for encouraging its application in research, clinical, and program settings. This responsibility includes disseminating research findings from researcher to researcher and also transmitting this information, in language that is meaningful, to health care providers, program administrators, State and local officials, and educators. NIAAA's National Clearinghouse for Alcohol Information (NCALI) serves as a major dissemination channel for this information.

The Organization of NIAAA

The focal point in the Federal effort to investigate health problems and issues in alcohol abuse and alcoholism, the National Institute on Alcohol Abuse and Alcoholism is one of three Institutes of the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), the other two being the National Institute on Drug Abuse and the National Institute of Mental Health. Described briefly below are the offices and divisions of NIAAA:

Office of the Director provides leadership, coordination, and direction in the development and implementation of NIAAA policies, goals, and priorities. It plans, directs, and provides overall administration of the Institute and serves as the focal point for the Department of Health and Human Services efforts in alcohol abuse and alcoholism. This office coordinates interagency, intergovernmental, consumer affairs, and equal employment opportunity activities of NIAAA. It also coordinates activities with the World Health Organization and agreements with foreign countries. NIAAA's National Advisory Council, comprised of Federal and private sector professionals in the alcoholism field, advises the Institute Director on policies, identifies emerging issues and trends, and reviews, discusses, and evaluates individual applications for Federal grant-in-aid funds.

Office of Policy Analysis develops recommendations for program policies for NIAAA. This office monitors policy issues affecting the alcohol field and conducts special studies and analyses in areas related to alcoholism policies and programs. It serves as the Institute's focal point for the development and analysis of programs designed to improve the financing of alcoholism services. In addition, it conducts legislative analyses and prepares materials and testimony for presentation to Congress and to State and local groups.

Office of Scientific Affairs provides guidance to the Director regarding the Institute's research programs and other scientific activities. This office administers peer review of grant applications and contract proposals and coordinates the development of program policies and rules relating to Institute extramural activities.

Office of Planning and Resource Management provides administrative support in areas such as financial management, grant and contract management, and administrative services. In addition, the Office develops long-range and operational plans for the Institute, coordinates evaluation activities, and serves as the focal point for preparing budget material for presentation to Congress and interaction with appropriation committees.

Division of Extramural Research plans, develops, and supports programs of basic and applied research on the multiple determinants and processes of alcoholism and other alcohol-related problems, on the prevention of alcohol abuse, and on the diagnosis, treatment, and rehabilitation of persons who abuse alcohol. This Division administers the Institute's National Alcohol Research Centers program as well as its research scientists development and training programs. In addition, it collaborates with other national and international agencies, universities, and scientific organizations, and provides technical assistance to universities, Federal agencies, State and local governments, and community and voluntary organizations.

Division of Intramural Clinical and Biological Research plans, develops, and conducts a program of basic and applied research, including metabolic, preclinical, and clinical investigations, on alcoholism and other alcohol-related problems. This Division provides in-house research scientist training in a variety of disciplines for work in alcohol-related research, and collaborates with other agencies, universities, and scientific organizations. It also operates a clinical research facility for the purpose of conducting research and developing improved methods of clinical care.

The Organization of NIAAA

Division of Prevention and Research Dissemination conducts and fosters prevention and public education activities through mass media campaigns and the widespread dissemination of prevention-related materials. It gathers and disseminates programmatic and scientific information on alcohol abuse and alcoholism through the Institute's National Clearinghouse for Alcohol Information. It collects findings from alcohol research supported or conducted by NIAAA and incorporates these findings into the body of alcohol-related information available for dissemination, in part by preparing printed and audiovisual materials. In addition, this Division organizes and conducts conferences and workshops for the purpose of establishing scientific agreement on the state of the art in various priority research areas. This permits the preparation of up-to-date documents on alcohol problem prevention, early intervention, treatment, and rehabilitation for dissemination to State and local governments, the private and voluntary sectors, and others engaged in alcohol-related work.

Division of Biometry and Epidemiology plans and conducts studies and surveys on the incidence and prevalence of alcohol abuse and alcoholism, both nationally and in specific population groups. It conducts national surveillance activities and develops and maintains information systems to collect and analyze alcohol-related data. This Division also collaborates with other organizations engaged in alcohol data collection activities in order to exchange pertinent data and to utilize existing data systems where appropriate.

For further information, contact: Office of the Director, National Institute on Alcohol Abuse and Alcoholism, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857 or The National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852.

Applying for an NIAAA Grant

NIAAA encourages scientists to become involved in alcohol-related research. Researchers in all disciplines and fields of study are invited to apply for grant support. NIAAA supports research in the biomedical and behavioral sciences for projects to study the nature, causes, diagnosis, treatment, control, prevention, and consequences of alcohol abuse and alcoholism. In addition, NIAAA offers support for the training and development of persons to pursue careers in alcohol research.

Types of Grants from NIAAA

In meeting its legislative mandate to support alcohol research, NIAAA offers a wide range of research and research-related programs. These programs include support for (a) research projects ranging from small grants limited in time and amount to large-scale multiproject grants with long-term support and (b) the training of persons for careers in research and their development as scientists in alcohol research. Types of grants most frequently awarded by NIAAA include the following:

Research Grant Programs

R01 - Research Project (Traditional). Support for a discrete, specified project to be conducted by the named investigator. The duration of the grant period and the level of funding provided depend on the requirements of the proposed research.

R23 - New Investigator Research Award (NIRA). This program is designed to attract into alcohol research scientists who have not held principal investigator status on a prior NIAAA research grant. New investigators must have completed formal training and must ordinarily have a doctoral degree or its equivalent. Researchers with more than 5 years of experience in another field may also apply providing they have not published extensively in the alcohol research field.

R03 - Small Grant. This is a 1-year, nonrenewable grant not to exceed $15,000 for direct costs for exploratory or pilot studies or for the development of a new technique or method.

SBIR - Small Business Innovation Research. Phase I grants (R43) support projects to establish the technical merit and feasibility of research and development ideas that may lead to a commercial product or service and Phase II grants (R44) support their subsequent development. (SBIR projects may also be supported under a contract mechanism.)

P01 - Program Project. Support for a multidisciplinary research effort composed of several (at least three) projects that are interrelated and are expected to contribute to a central research goal.

P50 - Alcohol Research Centers. Long-term (typically for 5 years) support for a multiproject, interdisciplinary research program organized around a central research theme. In addition to conducting research, the centers are expected to be regional or national research resources and to afford opportunities for research training. It is recommended that persons interested in applying for grants for multiproject research support (P01 and P50) contact NIAAA program staff prior to the preparation and submission of an application.

Training and Development Grant Programs

F - Individual Fellowships. Predoctoral (F31) support is provided to individuals for supervised research training leading to a research degree (e.g., Ph.D.). Postdoctoral (F32) support is provided to individuals to broaden their scientific background and to extend their potential for research.

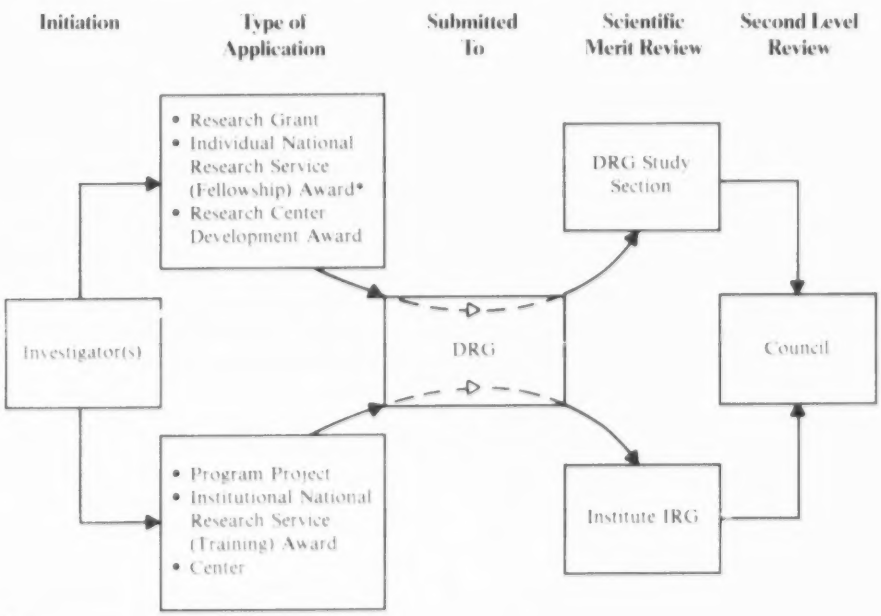
T32 - Institutional Training. This grant enables institutions to select individual trainees and to provide them with supervised predoctoral and postdoctoral research training.

Applying for an NIAAA Grant

K - Scientist Awards. Provides salary support for career scientists at three levels. The K01 award supports a scientist in need of advanced research training and additional experience, the K02 award supports a scientist in need of additional independent research experience, and the K05 award supports a senior scientist qualified to pursue an independent research program. Support is typically for 5 years.

Potential applicants may obtain program announcements and guidelines for submitting applications from NIAAA's National Clearinghouse for Alcohol Information. These grant information kits identify areas of interest, specify eligibility, review criteria, and describe the application and award process. In addition, a new pamphlet on preparing a research grant application, "Helpful Hints," is available. Write to Reference Services, NIAAA National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852.

Initiation and Review of a Grant Application



* Does not require council review

The National Clearinghouse for Alcohol Information

To meet the needs of educators, physicians, nurses, scientists, counselors, social workers, and other professionals, as well as the general public, the NIAAA Clearinghouse collects information from around the world on alcoholism and the use and abuse of alcohol. It scans books, journals, conference proceedings, curriculum materials, and reports looking for alcohol-related information available. It takes the results of NIAAA-supported and other alcohol research, incorporates these findings into its computerized data base (currently composed of more than 50,000 information items), and disseminates them via various computer searches and Clearinghouse publications and services.

Clearinghouse staff provide information in response to individual inquiries of a personal or professional nature. When appropriate, referrals are made to other agencies and organizations. The Clearinghouse also maintains a library and reading room open to researchers and the public.

Clearinghouse analysts perform searches of the data base, which contains citations and abstracts of scientific, technical, and programmatic documents in areas such as biochemistry, physiology, medicine, prevention and education, public health, psychology, animal research, treatment and therapies, mental health, legislation and criminal justice, safety, sociology, statistics, and special population groups.

The Clearinghouse distributes, free of charge, limited numbers of alcohol-related pamphlets, brochures, books, posters, and other materials published by NIAAA. These range from reports to Congress summarizing recent research findings to idea books on setting up alcohol programs to basic question-and-answer pamphlets on alcohol problems. Subscription materials include NIAAA's quarterly magazine, *Alcohol Health and Research World*, and the *Alcohol Awareness Service*, a bimonthly guide to current information in the field. You may contact the Clearinghouse at P.O. Box 2345, Rockville, MD 20852, or call (301) 468-2600.

The National Institute on Alcohol Abuse and Alcoholism wishes to extend its appreciation to the following organizations and individuals who provided the photographs that appear in this brochure: William Branson, medical photographer, National Institutes of Health; the Mount Sinai School of Medicine; the University of Connecticut Health Center; University of Colorado Health Sciences Center at Boulder and Denver; Washington University School of Medicine at St. Louis; the Alcohol Research Group and Medical Research Institute of San Francisco; Hahnemann University School of Medicine; University of Florida J. Hillis Miller Health Center, Center for Alcohol Research at the University of Florida; Pacific Institute for Research and Evaluation; Prevention Research Center at Berkeley; Scripps Clinic and Research Foundation; the NIAAA Intramural Laboratory of Clinical Studies, Section of Clinical Science, Unit of Family Studies, Section of Clinical Brain Research, Section of Clinical Biochemistry and Pharmacology, Section of Analytical Chemistry, Section of Neurochemistry, Unit of Genetic Studies, the Laboratory of Preclinical Studies, the Laboratory of Metabolism; the Laboratory for Studies of Neuroadaptive Processes; the National Institutes of Health; Dr. Cecil Fox, NIH senior scientist; the National Institute on Aging; the National Institute of Child Health and Human Development; the Human Ecology Institute; the Washington Hospital Center and MedSTAR Unit; the United Steelworkers of America; WDCA-TV, Washington, DC; and Dr. Clarion Fuller.

Prepared by the NIAAA
National Clearinghouse for
Alcohol Information
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For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

National Institute on Alcohol Abuse and Alcoholism
DHHS Publication No. 85-1392
Printed 1985